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ABSTRACT

The opening section of this paper describes the author's first experience with collegial attempts at curriculum reform through practical inquiry, illustrating a process in which ideas are tested and developed in action. It is pointed out that this form of teacher-based practical inquiry is a characteristic feature of a certain kind of curriculum reform process. It is stated that "the institutionalisation of 'action-research' and 'teachers as researchers' as approaches to teacher education within academic institutions raises a number of critical issues for tutors and supervisors to reflect about. If we are to facilitate reflective practice as a form of educational inquiry in schools then we must treat teacher education as a reflective practice also." Some of the issues to be faced by teacher educators in promoting reflective practice and action research on the part of teachers are illustrated by detailed descriptions of three reform projects: (1) The Humanities Curriculum Project, under the direction of Lawrence Stenhouse (1967); (2) The Ford Teaching Project (1973-75); and (3) The "Teacher-Student Interaction and Quality of Learning Project, (1981-83). (JD)

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TEACHERS AS RESEARCHERS: IMPLICATIONS FOR SUPERVISION AND TEACHER EDUCATION

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TEACHERS AS RESEARCHERS: IMPLICATIONS FOR SUPERVISION AND TEACHER EDUCATION

Historical Context

The 'teachers as researchers' movement emerged in England during the '60s. Its context was essentially that of curriculum reform within a differentiated educational sytem. At the age of 11 children were allocated to either Grammar or Secondary Modern schools on the basis of tests known as the 11+. The Grammar School curriculum was essentially subject-based and the syllabuses were orientated towards public examinations at 16, in the form of the General Certificate of Education (GCE). Grammar school students then faced a choice of whether they left school for a job or proceeded to take certain G.C.E. subjects for a further two years to secure advanced level passes, which together with their ordinary level passes would secure entrance into a university. Those who failed the 11+, the vast majority of students, followed a watered down subject-based curriculum. A small proportion of these proceeded to take G.C.E. ordinary level examinations at 16. The rest either took no public examinations at all or examinations which were considered to have inferior status to G.C.E. The national school leaving age was 15, and many students left without taking any public examinations at all.

I began my teaching career in a Secondary Modern school in the early '60s, as a religious education and biology specialist. The Education Act of 1944 made religion a compulsory curriculum subject. In fact it was the only subject secondary schools were legally obliged to provide. However, the system of public examinations ensured a broad conformity of curriculum provision. The control over the curriculum exerted through public examinations was greatest in the Grammar schools. But the content of G.C.E. syllabuses was reflected in the curriculum framework of the Secondary Moderns. The G.C.E. syllabuses were devised and the examinations set and marked, by a number of

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university controlled examination boards.

Large numbers of students in the Secondary Modern schools were alienated from the 'watered-down' academic curriculum they followed. They were destined to emerge from their schooling as failures, with the exception of the few who could cope sufficiently to compensate for their failure to pass the 11+ test by taking the G.C.E. examinations at ordinary level. (The Secondary Moderns generally did not make provision for advanced levels). The grouping practices of the Secondary Moderns tended to reflect those of the Grammar schools. On entry students were grouped into 'streams' according to 'academic ability', and although in theory movement across was possible it happened rarely in practice. Students' opportunities for success were largely determined by the 'streaming' system, although the alternative grouping practice of 'subject setting' was adopted in many schools to rectify the perceived deficiencies of the system. 'Setting' was essentially a system of streaming on a subject rather than a cross-curricular basis, and normally applied to only a certain range of academically high-status subjects in the upper part of the 11-16 age range. It tended to operate more in the Grammar than the Secondary Modern schools, because its major purpose was to give 'above-average' students opportunities to maximise their number of G.C.E. subject passes.

Knowing that they were destined within the system to fail, large numbers of students in the Secondary Moderns lacked any interest in the subject-matter of the curriculum. Their slim chances of securing examination-success meant that examinations were a poor extrinsic motivator. The alienation was particularly acute in those humanities subjects which students and their parents perceived to have little relevance to the world of work: namely, history, geography and religion.

Faced with both passive resistance and active rebellion teachers in the Secondary Moderns had two choices. The first was to develop and maintain a system of coercive-control: to turn Secondary Moderns into 'concentration camps'. The second was to make the curriculum more intrinsically interesting for the students and transform the examination system to reflect such a

change.

During the '60s the Secondary Moderns began to vary somewhat in their ethos. At one end of a continuum were the 'concentration camps' and at the other the quite recognizable 'innovatory Secondary Moderns', with the majority of schools in between struggling with an internal tension between these two climates. I was fortunate in beginning my teaching career during 1962 in a school which was beginning to emerge at the innovatory end of this continuum.

The Emergence of the Curriculum Reform Movement

During my period in the school we destreamed and created mixed-ability groups. Curriculum reform focused on the teaching of the humanities subjects of english, history, geography and religion in the fourth and fifth years. At first they operated within subject boundaries. But teachers across these subjects shared the common aspirations of enabling students to make connections between the subject-matter and their everyday experience. In each subject-area content was selected and organised around life-themes such as 'the family', 'relations between the sexes', 'war and society', 'education', 'the world of work', 'law and order', 'the media' etc.. Experience taught us that we could not help students explore these themes in depth by maintaining a subject-based m of curriculum organisation. Students experienced a great deal of repetition as they moved from one subject to another. What went on in english didn't appear so very different from what went on in history, geography or religious studies. We began to realise that content from the different subject-areas needed to be employed eclectically by students in terms of its perceived relevance to questions and issues as they emerged in the classroom. Separate time-slots were beginning to look disfunctional, and teachers needed to draw on each others' subject expertise. So we created 'integrated studies' and worked together in cross-subject teams. Similar developments were taking place in a number of Secondary Moderns across England and Wales.

Implicit in this school-based curriculum reform movement were newly emergent conceptions of learning, teaching, and evaluation which were explicated in justificatory discourse as the innovatory teachers attempted to negotiate collaborative activities with each other, and to justify them to their more traditionalist colleagues in staffrooms. I well remember the lay-out in the staff-room of my school: a large oval arrangement of easy chairs around the gas-fire. There over coffee we sat during breaks discussing and debating our attempts to bring about change with colleagues who regarded our ideas with some scepticism. The quality of this curriculum discourse was an experience which has influenced all my subsequent thinking and action as an educationalist.

From the standpoint of my own professional life-history the activity of curriculum theorising was something I initially encountered amongst teachers in a school. The 'theories' of learning, teaching, and evaluation we articulated in staff-room gatherings and meetings derived from our attempts to bring about change in a particular set of circumstances, rather than from our professional training in universities and colleges of education. They were not so much applications of educational theory learned in the world of academe, but generations of theory from attempts to change curriculum practice in the school. Theory was derived from practice and constituted a set of abstractions from it. This view of the theory-practice relationship was quite contrary to the rationalist assumptions built into teacher training at the time: namely, that good practice consists of the application of theoretical knowledge and principles which are consciously understood prior to it.

I learned as a teacher that theories were implicit in all practices, and that theorising consisted of articulating those 'tacit theories' and subjecting them to critique in free and open professional discourse. I also learned that high quality professional discourse depends upon the willingness of everyone involved to tolerate a diversity of views and practices. In my school there was certainly an identifiable group of teachers who could be described as 'the innovators'. But we never became a

self-contained and exclusive club or an isolated rebel clique, so we never established an impermeable dogmatism.

There were a number of reasons for this. Firstly, the staff group was a relatively small one of around 25 teachers. This maximised opportunities for each individual to have frequent face-to-face interactions with everyone else. So we got to know each other as persons pretty well. We played cricket, golf and football with each other, socialised together after school and at week-ends, and collaborated in out-of-school activities with students. This knowledge of each other as persons did much to foster free, open, and tolerant professional discourse.

Secondly, the headteacher refrained from using his own power position to impose change on the staff. He had a broad vision of the direction in which he wanted things to go, and everyone was aware of it. They were aware that his sympathies were with the views of the innovators. But he did not put himself forward as the authoritative curriculum theorist, or as the major initiator of reforms. He identified issues and problems and then encouraged staff to develop their own change proposals. He then supported the implementation of proposals, if certain conditions were complied with. One condition was that participation by staff in charge should be voluntary. Another was that the innovation should be monitored and evaluated, and accounts of its effects rendered to the staff as a whole.

The headteacher's management practices did much to make the staff at the traditionalist end of the spectrum feel that they were not entirely powerless to exert leverage over the nature, direction, and pace of change. And they did much to ensure that the innovators felt under an obligation to communicate and justify their practices to the whole staff group. What the headteacher did was to foster a collegial system of intra-professional accountability grounded in reflective practice.

One example of the headteacher's management style was the introduction of mixed-ability grouping. Streaming had become a controversial issue in the school. He responded by organising a series of staff meetings on the subject. Rather than presenting

his own arguments against streaming or inviting a member of staff to do so, a major researcher at the reputable National Foundation for Educational Research was invited to address the staff. By the end of the series of meetings the general feeling amongst the staff was that streaming in the school was having undesirable effects. But many were anxious about a change to mixed-ability grouping. Some argued that 'bright' children would be disadvantaged, while others doubted their ability to cope with the 'less able' in this setting. The headteacher suggested that a one-year pilot experiment should be established with the first years and thoroughly monitored by all the staff prior to any decision about establishing mixed groups throughout the school. At the end of the pilot experiment the vast majority of teachers were prepared for whole-school innovation, but the head of the maths department still held out for grouping according to ability. So it was decided that the maths groups would be organised in ability sets.

I have attempted to describe those contextual factors which contributed to the quality of curriculum discourse in my school. They pick out a personal and a structural dimension. We had opportunities to get to know one another as persons beyond the boundaries of our professional roles. But we also had a management structure which supported a 'bottom up' rather than a 'top down' change process, and a collegial rather than an individualistic or bureaucratic form of accountability, i.e. accountability to peers as opposed to accountability to oneself alone or to a superordinate.

Handy (1984) claims that management systems threaten the professional autonomy of practitioners when policy is both generated and executed hierarchically. He argues that management systems which establish collegial structures for policy generation but retain hierarchical structures for executing policy are likely to find acceptance amongst professionals. Certainly the management of change in my school reflected this separation of policy generation from executive roles. In fact the deputy headteachers were at the traditionalist end of the spectrum. But this was not a tremendous problem for the change

agents in the school, because they had very little control over the generation and development of curriculum policies.

From the standpoint of my professional life-history I first participated in educational research, as well as curriculum theorising, as a teacher in my school. Theorising about practice was not an activity conducted in isolation from researching our practice.

For example, we frequently debated whether students were able at 14 years of age to reflect meaningfully about adult experience. Some argued that they were not in a position to grasp the meaning of certain adult experiences because they had not reached an appropriate stage of emotional development. We didn't resolve such issues by citing theories of adolescent development contained in the psychological research literature, although some of us might have employed them from time to time when defending our own 'theories of readiness' or trying to undermine those of others. Instead, we searched for evidence in our practices within the school.

Curriculum practices were not derived from curriculum theories generated and tested independently of that practice. They constituted the means by which we generated and tested our own and each others' theories. Practices took on the status of hypotheses to be tested. So we collected empirical data about their effects, and used it as evidence in which to ground our theorising with each other in a context of collegial accountability. We didn't call it research let alone action-research. This articulation came much later as the world of academia responded to change in schools. But the concept of teaching as as reflexive practice and form of educational inquiry was tacitly and intuitively grasped in our experience of the innovation process. Our research was by no means systematic. It occurred as a response to particular questions and issues as they arose. Let me illustrate the process.

The deputy head in charge of the pastoral care of girls organised an event in which the fourth year girls were shown a film depicting the birth of a baby in great detail. Letters

requesting parental permission for showing the film had been sent out well in advance. By lunch-time on the day of the showing, word got around the staff-room that four girls had simultaneously fainted during the showing. I remember arguing that it would never have happened if the boys had been there to provide an 'emotional check' on this chain reaction.

During the afternoon the boys in my fourth year class complained about not being able to see the film. They claimed the girls were using the occasion to impute 'emotional immaturity' to them: an explanation for exclusion the girls had evidently obtained from the female deputy head. I decided to test this gender-based theory of 'emotional maturity' (perhaps against my own equally gender based one) by inviting all fourth year boys to see the film in the geography room after school and any girls who wished to view it again. A large number of boys and girls turned up. No immature behaviour was evidenced from the boys, no girls fainted, and the showing was followed by a thoughtful, lively, and sensitive discussion.

However, at one point the film was interrupted by the entrance of the male deputy head who told me to stop it. He argued that it was not suitable for the boys to watch and feared problems would arise since they had not been given as thorough a preparation as the girls had. The school, he argued, could not defend my action since parental permission had not been granted for the boys to view it. I had offended against school procedures. I argued that everything was going well and that it would be counter-productive to stop the film now.

The next morning the headteacher called me into his study and told me I had upset both his deputies. He reprimanded me for going against the established procedures, and then in the same breath praised me for having such a 'good idea'. He then asked me to lead a discussion with a mixed-sex group of fourth years in the school hall that morning. The aim was to elicit their views on the kind of sex education they wanted in the school. The headteacher told me that he intended to slip in to the hall to listen after the discussion had begun to flow naturally and smoothly.

The data we gathered during these events, from observation of practice and student feed-back, provided the basis for changes in the sex education programme within the school. Moreover, the data processing did not take place against a background of routinised and predictable practices. The practice shifted as the data was processed. Information about the fainting episode led me to hypothesise that it wouldn't have happened in the presence of boys. The feed-back from the boys about their feelings on being excluded prompted me to organise the second showing in order to test the hypotheses that the girls wouldn't faint in the presence of the boys, and that the boys wouldn't display immature behaviour in the presence of girls. The success of the second showing then stimulated the gathering of further data from students about their needs in the area of sex education.

I wouldn't claim that this is a good example of rigorous educational inquiry. But it does illustrate a process in which ideas are tested and developed in action. I would argue that this form of teacher-based practical inquiry is a characteristic feature of a certain kind of curriculum reform process. Let me therefore try to summarise, on the basis of my experience, what these characteristics are:

1. It is a process which is initiated by practising teachers in response to a particular practical situation they confront.

2. The practical situtation is one in which their traditional curriculum practices have been de-stabilised and rendered problematic by the development of student resistance or 'refusal to learn'.

3. The innovations proposed arouse controversy within the staff group, because they challenge the fundamental beliefs embodied in existing practices about the nature of learning, teaching, and evaluation.

4. Issues are clarified and resolved in free and open collegial discourse, characterised by mutual respect and tolerance for each others' views, in the absence of power constraints on its outcomes.

5. Change-proposals are treated as provisional hypotheses to be tested in practice within a context of collegial accountability to the whole staff group.

6. The management facilitates a 'bottom-up' rather than a 'top-down' approach to the development of curriculum policies and strategies.

The Curriculum Theory of the Curriculum Reform Movement

This kind of curriculum reform process is not theoretically neutral. It is guided by a cluster of inter-related ideas about the nature of education, knowledge, learning, curriculum and teaching. These ideas become articulated and clarified in the process. Education is no longer viewed as a process of adapting or accommodating the mind to structures of knowledge. Instead it is viewed as a dialectical process in which the meaning and significance of structures are reconstructed in the historically conditioned consciousness of individuals as they try to make sense of their 'life situations'. The mind 'adapts with' rather than 'adapts to' structures of knowledge.

This view of education implies a shift in the concept of learning which in turn shifts the criteria by which it is assessed. Learning is viewed as the active production rather than the passive reproduction of meaning. Its outcomes are no longer to be assessed in terms of the match between inputs and predetermined output criteria, but rather in terms of the intrinsic qualities of being they manifest. When learning is viewed as 'active production' then it becomes a manifestation of human powers, e.g. to synthesise disparate and complex information into coherent patterns, to look at situations from different points of view, to self-monitor personal bias and prejudice etc. The development of understanding is construed as

the extension of the students' natural powers in relation to the things which matter in life. The manifestation of such qualities can be described and judged but not standardised and measured.

The idea of teaching embedded in the change process is also different. It is no longer construed as an activity aimed at controlling or casually determining the outcomes of learning. Rather it is viewed as an enabling activity which aims to facilitate an indeterminate dialectical process between public structures of knowledge and individual subjectivities. Its focus is on the process rather than the product of learning. It is directed towards activating, engaging, challenging, and stretching the natural powers of the human mind.

The criteria for evaluating teaching refer to the extent to which teachers provide students with opportunities for manifesting and enhancing these powers. The criteria for evaluating learning and teaching are distinct. The former refer to the qualities of mind manifested in learning outcomes. The latter refer to the extent to which the pedagogy is an enabling rather than a constraining influence on students' opportunities to manifest and develop these qualities. Such a pedagogy requires teachers to reflect in as well as on the classoom process quite independently from any assessment they make of the quality of learning outcomes. Pedagogy is a reflective process.It is process rather than product data which forms the basis of evaluations of teaching. And a major source of that data will be the students themselves; their accounts of the respects in which teaching enables or constrains the development of their powers in relation to the things which matter.

All this contrasts with the criteria of teacher evaluation implicit in the idea that teaching is about controlling or determining learning outcomes. Such criteria are the same as those governing the evaluation of learning: namely, specifications of desired outputs. If a student's performance fails to match the output specification then responsibility for such a 'defect' is ascribed to the teaching. Evaluating teaching from the perspective of the product model does not involve grounding judgements in subjective data about students'

perceptions of teaching within the pedagogical process. Although teachers will reflect on their practice in the light of its outcomes, they will not reflect on it in process. In this sense teaching will not constitute in itself a reflective practice.

The final conceptual shift involved in the curriculum reform process described is in the view of the relationship between curriculum and teaching. The curriculum is not seen as an organised selection of knowledge, concepts, and skills determined independently of the pedagogical process, solely on the basis of public structures of knowlege. Rather, the curriculum map is shaped within pedagogical practice as the teacher selects and organises 'knowledge content' in response to students'own search for meaning, and then monitors their responses in the light of such criteria as 'relevant to their concerns', 'interesting', 'challenging', and 'stretching'. Students' subjective experiences constitute the data, in the light of which the teacher adjusts and modifies the emerging map. As the map unfolds, and is pedagogically validated in retrospect through self-monitoring, it enables the teacher to anticipate but not predict future possibilities. It provides the teacher with a sense of direction without prescribing a fixed agenda.

As an aspect of a reflective pedagogy the curriculum is always in the process of becoming. It is developed in and through the pedagogical process. The activity of validating the developing map within the classroom process entails a reflective pedagogy. Validating the curriculum-in-process requires the teacher to appraise all the dimensions of both pedagogy and its context. The teacher has to sort out whether indications that the students are not engaged with, or stretched by, the content can be explained by the inappropriateness of the material and its organisation or by other factors, e.g. the way the teacher structures and handles student responses, or institutional and psychological constraints on self-directed and active learning. This requires a great deal of self-reflection and experimentation. Understanding and diagnosing the problem-situation is not an instant event. The action implications of explanatory hypotheses about constraining factors within the pedagogy and its context have to be explored and evaluated before

one can conclude that the selection and organisation of content is operating as a significant constraint on learning.

I have tried to describe the cluster of theoretical ideas embedded, with varying degrees of explicitness, in the curriculum change process I participated in within my Secondary Modern school. This curriculum change process emerged in the '60s in a number of innovatory Secondary Modern schools. The prospect of the raising of the school leaving age from 15 to 16 years was a great impetus from the mid '60s for a radical rethink of the curriculum for the so-called average and below average ability student. The development of a new teacher-controlled public examination at 16+, the Certificate of Secondary Education, also enabled teachers to construct examinations which reflected the aspirations of the curriculum reformers.

As selection at 11+ was replaced by the reorganisation of secondary schools into comprehensive institutions the change process was considerably diluted. The Secondary Moderns either merged with Grammar schools or were developed into Comprehensives. The old Grammar school view of education, knowledge, learning, and teaching dominated the new institutions. They felt under political pressure to justify their existence against Grammar school 'standards'. From the turn of the decade we witnessed what has been described as the 'grammatisation' of the Comprehensive school. However, the 'curriculum theory' became a continuing, if subordinate, aspect of the professional culture of secondary teachers.

'Highjacking' Teachers' Theories: the academic word game

I have spent a considerable amount of space mapping out a curriculum change process in which I participated over 20 years ago because I have spent my subsequent professional life as a teacher educator and educational researcher articulating and elaborating on the theoretical ideas which underpinned it. I wanted to make it clear that the theoretical origins of my work with teachers on various action-research projects lay in my experience of a certain kind of innovatory curriculum practice in

schools. My theoretical understanding of education, knowledge, learning and teaching are not so much derived from an academic culture which adopts a contemplative stance towards the process of schooling, but from curriculum practices in which I participated as a teacher with my peers. If these understandings are now widely shared aspects of the academic culture in schools of teacher education it is because teacher educators have appropriated them from practice.

Ideas which subsequently emerged in academia like 'there can be no curriculum development without teacher development', 'teaching as a form of educational research', 'teachers as researchers', and 'educational action-research', all encapsulate certain dimensions of the curriculum practice I have described. But they describe that practice in the language of academe. Naturalistic reflection in and on the pedagogical process becomes described as 'research'. Assumptions underpinning such academic language have tended to distort the process. All too often research is viewed as something teachers now do <u>on</u> their practice. They step out of their pedagogical role. Teaching and research become posited as separate activities, whereas from the standpoint of the practitioner reflection and action are simply two aspects of a single process. Having translated 'reflection' or 'self-evaluation' into 'research' the academic is in danger of interpreting methodology as a set of mechanical procedures and standardised techniques rather than as a cluster of dynamic ideas and principles which structure, but do not determine, the search for understanding within the pedagogical process. The separation of 'research' from 'teaching' implies a separation between teaching and curriculum development. The idea of developing the curriculum through teaching presupposes a unified concept of teaching as a reflective practice.

Rather than playing the role of the theoretical hand maiden of practitioners by helping them to clarify, test, develop and disseminate the ideas which underpin their practices, academics tend to behave like terrorists. We take an idea which underpins teachers' practices, distort it through translation into 'academic jargon', and thereby 'highjack' it from its practical context and the web of interlocking ideas which operate within

that context. And so we find teacher educators and educational researchers propagating ideas like 'educational action-research', and 'teachers as researchers' as if they could be applied to any sort of practice in schools regardless of teachers' conceptions of education, knowledge, learning, and teaching, and regardless of the institutional and social context of their practices.

All too often the idea that educational inquiry consitutes a form of teaching and vice versa gets lost. In Britain we now have numerous award-bearing and research-based inservice courses for teachers. Action-research and the 'teachers as researchers' movement is now enthusiastically promoted in academia. But the question is this: are the academics transforming the methodology of teacher-based educational inquiry into a form which enables them to manipulate and control teachers' thinking in order to reproduce the central assumptions which have underpinned a contemplative academic culture detached from the practices of everyday life?

I know that I have often colluded in acts of academic imperialism. This essay is an attempt to return to the experiential origins of my ideas, in the hope that this reflexive process will help me to avoid the distorting effects of an over-immersion in academia. It is not that I feel my professional life as an academic has not helped me to deepen my understanding of educational practice. It gives me access to ideas which indeed challenge the very assumptions which have underpinned teacher education and educational research. The academic culture is not homogeneous and embodies its own counter-culture. Nevertheless, the institutional structures which impinge on my daily practice continue to sustain and support conceptions of 'excellence' and 'standards' which make it difficult for me to initiate and sustain forms of practice as a supervisor and educational researcher which embody different conceptions of these terms.

The institutionalisation of 'action-research' and 'teachers as researchers' as approaches to teacher education within academic institutions raises a number of critical issues for tutors and supervisors to reflect about. If we are to facilitate reflective

practice as a from of educational inquiry in schools then we must treat teacher education as a reflective practice also.

In the rest of this paper I shall try to identify some of the ways in which teacher educators have tended to distort and constrain the development of the reflective practice they aspired to promote. I will do so by reflecting on my own experience as a teacher educator.

The Humanities Curriculum Project: support for reflective curriculum practice

In the summer of 1967 I joined a large curriculum reform project initiated by the Schools Council, a national agency established in the mid-'60s to support reform in the areas of curriculum and examinations. The Council had given an early priority to reforming the curiculum for students of 'average' and 'below average' academic ability in the humanities subjects. It had published two major working papers (numbers 2 and 11) on the problem prior to establishing the Humanities Project under the direction of Lawrence Stenhouse. The whole ethos of the Council was to support and disseminate the best innovatory practices in schools.

Stenhouse's contribution to the curriculum reform movement was to articulate the paradigm of curriculum design which had emerged from the school-based curriculum reform movement in embryo form. Central to this paradigm was the specification of a praxiology: a set of principles to guide teachers in translating educational aims into concrete pedagogical practices (see Stenhouse 1985, and Elliott 1983). This praxiology (my term for such principles rather than Stenhouse's) embraced the process of education and not simply its content.

Reflecting the trend to focus on life themes as a basis for re-organising curriculum content, Stenhouse's starting point was to articulate a general aim for the study of such themes. The human situations and acts they referred to, raised controversial value-issues within our society. So Stenhouse defined the aim of the humanities in education as 'developing an understanding of

social situations and human acts and the controversial value issues which they raise'. He refused to analyse this aim into specific content objectives, a position which was entirely consistent with the theory of learning underpinning the curriculum change process I outlined earlier. Instead he analysed the aim into a set of procedural principles governing the handling of information in classrooms. After R. S. Peters (1968), Stenhouse argued that from an educational aim one could logically derive a form of pedagogical process which was consistent with that aim. The principles which defined the pedagogical process in the context of the Humanities Project were as follows:

1. that controversial issues should be handled in the classroom with adolescents;

2. that teachers should not use their authority as teachers as a platform for promoting their own views;

3. that the mode of inquiry in controversial areas should have discussion rather than instruction at its core;

4. that the discussion should protect divergence of view among particpants;

5. that the teacher as chairperson of the discussion should have responsibility for quality and standards in learning.

The teacher's role was to develop pedagogical strategies for realising these principles within the classroom. Such strategies couldn't be determined in advance of the circumstances of their operation. The procedural principles were intended to orientate and guide teaching but not to prescribe concrete action-strategies in the form of rules. Stenhouse believed such strategies were highly context dependent. It is possible to generalise strategies from past experience in a range of situations but their applicability to any future set of classroom circumstances had to be examined in situ. Such generalisations constitute practical hypotheses to be tested in particular pedagogical settings rather than sets of prescriptive rules.

Pedagogy conceived, after Stenhouse, as attempts to realise procedural principles in concrete practical form is necessarily a reflective process. Praxiology cannot be translated into praxis independently of the teacher's reflection and deliberation in particular situations. Moreover, praxis, as a set of strategic acts for realising the procedural principles of humanities teaching, cannot be divorced from the curriculum. The curriculum is not a body of predetermined static content to be reproduced via the pedagogical process. Rather it is the selection and organisation of content within a dynamic and reflective pedagogical process, and is therefore constantly evolved and developed through it. Pedaogy takes the form of an experimental process of curriculum inquiry. Hence, the centrality of the idea of teachers as researchers in Stenhouse's view of curriculum development. He claimed that there could be no curriculum development without teacher development and by this he meant the development of teachers' reflective capacities.

In a review of his book 'An Introduction to Curriculum Research and Development' (1975) in The Times Educational Supplement, David Jenkins described Stenhouse as a "chess player in a world of draughts". Certainly his thinking went beyond the prevailing conventions. In the world of academe he upset those academics smitten with the objectives or product model of curriculum development where aims are analysed into content objectives to provide a basis for selecting and organising predetermined content. Stenhouse argued that curriculum development was not a process which preceded the pedagogy, and pedagogy was not the technical process of transmitting curriculum content to achieve pre-specified learning outcomes.

In the world of teachers Stenhouse upset those traditionalists who were committed to the view that education is about the reproduction of knowledge content; a view which was unquestioned by academic enthusiasts for the product model. The traditionalists believed that teachers should use their authority to take sides on controversial issues in order to promote the right and correct point of view. More generally, they objected to Stenhouse meddling with pedagogy, viewing his procedural principles as prescriptive and an infringement of the teacher's

right to professional autonomy. In their view national curriculum projects should confine their efforts to mapping objectives and content. The role of such projects was to support curriculum change by providing resource materials for teachers to use. Develop the curriculum and let teachers decide how to implement it. Curriculum change was viewed as a process of changing the content rather than the process of education.

What these traditionalists, many of them serving on national committees of the Schools Council as representatives of teacher associations, failed to grasp was that Stenhouse's intrusion into the domain of pedagogy was based on a radical reinterpretation of the nature of the educational process and the relationships between its various elements. But they also failed to grasp that he was doing no more than articulating, in a very comprehensive form, the logic of teachers' initiated curriculum reform. I doubt if Stenhouse himself fully appreciated this, which only exacerbated the problem of communication. His ideas appeared to originate beyond the teachers' practical 'horizon', somewhere in academia. In my view they originated within the 'horizons' of teachers, from an emergent curriculum change process. The ideas emerged under the nose of the teaching profession, but many of its members failed to grasp them. They were perhaps so locked into their 'game of draughts' that they failed to appreciate that some of their peers at least were 'playing chess'.

Stenhouse was not the 'chess player'. His genius lay in his ability to penetrate at a stroke the logic which underpinned the new game some teachers were playing. But he tended to assume and convey the impression that the Humanities Project was a game he had invented rather than discovered. As I shall now explain this assumption presented not only problems for communicating the project to teachers, but for conceptualising the relationship between practitioners and teacher educators in the curriculum development process.

The central team of the Humanities Project appeared in some respects to fulfill the role teachers generally expected of curriculum developers. Initially we confined our attention to the production of materials. We edited multi-media packs of

resource material on such themes as 'The Family', 'War and Society', 'Poverty'. These packs were then placed in volunteer trial schools, after a training seminar for the teachers involved. They were asked to assess the potential of the materials for supporting a process of discussion-based inquiry into controversial issues. Of the central team Stenhouse viewed this role as less than ideal. It was, given the shortage of time leading up to the trials in schools, necessary to generate a foundation collection quickly. Teachers didn't have the time to produce it in a form which met the criteria set out below. However, it was hoped that as the classroom process became established they would continuously supplement and amend the foundation materials. The materials were edited in the light of the following criteria:

- the multi-media compilation should constitute selections from a variety of disciplines or arts;

- it should cover a wide range of controversial human acts;

- it should provide documentation of controversial issues from a variety of 'angles';

- it should support the exploration of controversial issues in depth

No detailed guidance for using the material was issued. The items were simply listed and cross referred to certain categories of human action, e.g. demonstrations, conscientious objection, killing, bombing cities. Teachers were not required to use particular items, and there was no prescribed sequence or path through the compilations. The selection and organisation of the material was for teachers to judge in process.

As developers of resource materials from which teachers could select, our role as outsiders did not constitute any threat to teachers' professional autonomy within the pedagogical process. The problems between 'outsiders' and 'insiders' only began to emerge as teachers began to provide us with feedback on their use of materials. Although we had asked them to evaluate the

extent to which the material supported the pedagogy, they tended to assume that their strategies for handling such material were non-problematic. They focused the critique on the materials rather than their context of use. When we raised questions about this context they began to feel that we were stepping out of role and encroaching on their professional territory.

One very good example of the tension was the large amount of feed-back teachers gave testifying to the difficulties students had in reading the material. An analysis of the feed-back forms revealed little consensus amongst teachers on any single item in the compilations. This suggested that 'the context of use' might explain negative student reactions to the material bettern than 'reading difficulty'.

We were faced with a situation in which we had not presumed 'pedagogical competence' on the part of the teachers, but where they had expected us to make such a presumption. The materials development team began to shift its focus from the production of material to the study of the pedagogical context in which it was being used. In relation to the 'reading difficulty' issue, for example, we observed classrooms, and interviewed students. The students frequently denied finding the material difficult and inaccessible for purposes of discussion. "You can always get the gist of it, and then understand more as you discuss it", was a typical response. The problem from the students' point of view was that teachers believed they couldn't comprehend the material and therefore spent a lot of time taking them through comprehension exercises before the material was discussed. "You don't feel like discussing it after he has given you a hundred questions to answer about it first", I remember one student explaining.

In the light of this kind of student feed-back we began to observe two quite distinct patterns of information handling in classrooms; namely:

1. Read --- Understand --- Discuss

2. Read --- Discuss --- Understand

Less students testified to reading difficulty when they experienced the second pattern.

In the light of growing evidence that teachers were not evaluating curriculum material in the context of the strategies they employed in handling it, the problem of externally supporting curriculum development in schools began to look very different. It was no longer simply a matter of producing materials for teachers to test in classrooms. It was also a matter of fostering the development of teachers' capacities for self-reflection. Providing feed-back from our own observations and interviews wasn't sufficient. From the teachers' point of view we were using the data we collected to mount a critique of their pedagogy. They suspected we were manipulating the data to these ends through the ways we collected, selected, and interpreted it. But they felt powerless to defend themselves since, as busy practitioners, they were unable to create an independent data-base.

The evaluation process in the classroom appeared to foster an unequal power relation between outsiders and insiders. No amount of feed-back in this context will foster self-understandings generated from teachers' self-initiated reflection about their practices. Its effect, when not successfully resisted, is to create a situation in which practitioners come to depend on outsiders for their self-understandings.

The perception of outsiders' attempts to promote dependency was reinforced by their apparent superior knowledge of the criteria governing the analysis of data. Teachers experienced their practices as being judged against criteria defined by the development team, i.e. the principles of procedure. It could be argued that if such criteria were genuinely implicit in teachers' conceptions of their aims then they should be helped to articulate these for themselves as they reflected about strategies for realising their aims. In other words, teachers should not only take responsibility for realising a pedagogical theory in practice, but also for generating such a theory from practice. Within the central team of the Humanities Project we

cast ourselves in the role of theory generators, and thereby tacitly reinforced an unequal power-relation between ourselves and teachers. I shall return to this point again.

We were not insensitive to the power issue, being committed to the idea that successive curriculum change depended on the development of teachers' capacities for self-analysis and reflection. Attempts were made to resolve the problem I have outlined by establishing a form of collaborative classroom inquiry which promoted rather than constrained self-reflection.

Teachers were invited to tape-record their lessons and send selected recordings to the central team for analysis. This strategy ensured that the outsiders worked on data collected and selected by the teacher. It also reduced the amount of data we had access to in comparison with the teachers, including access to very sensitive and threatening data about students' perceptions of the classroom and pedagogy. Each tape submitted was transcribed, and the transcript analysed by a member of the central team. The analyses, with the transcripts, were returned to the teachers for comment. They took the form of hypotheses about the problems and potential of the pedagogy for realising the procedural principles. Teachers were asked to explore these hypotheses in relation to their own classroom practices.

This collaborative strategy tended to reduce the anxiety level and consequent defensiveness of teachers. Not only did they exercise more control over our access to data, but they were able to treat our analyses of it as genuinely hypothetical. It became apparent that analyses of such partial data could only have the status of hypotheses. We could no longer easily convey the impression that our analyses were based on comprehensive evidence inaccessible to teachers. In fact we attempted to increase their access to data in comparison with ours, by suggesting that they should observe each other's classrooms and hold regular feed-back sessions with their students.

The strategy embodied a different form of triangulation process to the one we had previously adopted. The previous strategy had involved the collection of data from three points of view: that

of the observer, the teacher, and the students. But the process was controlled by the observer as was the analysis of the data it generated. The new strategy gave the teacher more control over the collection and analysis of triangulation data.

Our role as outsiders was perhaps more authentically one which facilitated, rather than controlled, teachers' thinking about their practices. The facilitating strategy was articulated as one of formulating diagnostic and action-hypotheses for teachers to test in their classrooms. Classroom inquiry became a collaborative process. However, it should be noted that the outsiders' role retained certain controlling elements. The teachers' inquiry was to be focused on hypotheses we generated and these were informed by our theoretical understanding of the pedagogical principles which underpinned the teaching aim. To that extent teachers' thinking was intentionally (but not necessarily consciously) structured by the outsiders' conceptions of the pedagogical process.

Not all of the teachers involved submitted recordings for analysis. The sizeable minority which did so inevitably constituted those who recognized a match betwen the project's pedagogical perspective and their own. By implication they tended to be the more reflective and self-aware teachers, since self-reflection is an intrinsic dimension of the pedagogical perspective itself. The problem for the central team was now perceived in terms of developing a strategy which would help the majority of participating teachers to implement the principles of procedure in their classrooms.

What I did was to undertake a comparative analysis of the tape-transcripts with a view to formulating a set of hypotheses which might be generalised across classrooms and schools. Having formulated the hypotheses I then transformed them into performance rules. In other words, I created an experimental praxis. The intention was to get the agreement of all teachers to stick to these rules for a stipulated period of time, so that the impact of the action-strategies they prescribed could be evaluated. The teachers were asked to collect this impact data and produce evaluation reports at the end of the 'experiment'.

Stenhouse himself was worried about the strategy I had proposed. He felt it was too impositional. His idea was that teachers should change their practices in the light of their own reflection. The choice of pedagogical strategies he believed should be theirs. His approach might be illustrated by the following example.

The tapes tended to indicate a prevalent pattern of interaction through which teachers pressurised students to agree with their 'hidden' points of view; thereby failing to realise the principle of 'protecting the expression of divergent views'. The pattern was initiated by such remarks as: "Do we all agree with what John has just said?". The students' initial response was to remain silent. The teachers then cast an eye around the class until a student said "Yes". The discussion was allowed to proceed.

We had asked teachers to test the hypothesis that this pattern had the effect of imposing constraints on the expression of divergent views. If they found that it did then they were asked to formulate an alternative action strategy for protecting the expression of divergence, and thereby keeping their tendency to constrain such expression in check, e.g. by asking "Does anyone disagree with what John has just said?".

Stenhouse wanted teachers to formulate action-strategies on the basis of a process in which they tested diagnostic hypotheses. I had gone a step further by formulating the action-hypotheses for them. Moreover, I had generalised these action-strategies from a very small sample of classroom practices. My presumption that the strategies reflected a common problem-structure for most classrooms caused Stenhouse anxiety. He felt it encouraged a dogmatic and rigid application of general rules rather than sensitivity to the particular contexts in which teachers needed to realise pedagogical principles. Moreover, Stenhouse feared that my approach would be greeted with hostility, since it would be interpreted as an attempt to prescribe teaching strategies for teachers.

- Individual teachers ought to control both the extent to which, and the conditions under which, other teachers have access to data from their classrooms;

- Headteachers ought to control the extent to which classroom data from their schools is accessible to outsiders, and the conditions under which access is given;

- Individual teachers ought to control the central team's access to both their classrooms and private interview situations with students;

- Classroom data gathered by the project's central team ought to be made accessible to the teachers concerned, except data over which students have rights of control, i.e. student accounts of classroom problems and teaching strategies;

- Students interviewed by the central team ought to control the extent to which others, including their teachers, have access to their accounts.

This framework was, in fact, designed to reduce the amount of control others, including peers and members of the central team, could exert over teachers' thinking about their practices. It posited others as resources the teachers could use in thinking about their practice without being dependent on their views.

Rather than initiating classroom visits we asked the teacher teams at school level to initiate requests for assistance once they had begun to identify problem-areas we might help them to analyse.

During the first few weeks of the project's life very few pedagogical problems were identified by our teachers. In spite of suggestions we had made about techniques and methods of collecting data (teacher and student diary-keeping, teacher-student discussions about classroom processes, tape-recording, case studies) only a few teachers used them initially. Few requests for visits from a central team member came in. We were faced with a considerable second-order action-research problem:

At the conference where we attempted to negotiate the strategies with teachers it was certainly difficult to get the message across that they were intended as experimental. Some teachers feared we were simply trying to buy them off with rhetoric. The real intent they suspected was an impositional one. Nevertheless, the teachers eventually agreed to shelve their doubts and to do their best to stick to the strategies for a period. Many of them did.

Some of Stenhouse's fears were realised. For example, there was one rule which forbade the provision of anecdotal information in the classroom by students. It was based on data which suggested that ancedotes constrained discussion because there was no way in which the students could contradict the information they contained. Such information was not publicly accessible to critique. The over-all effect was to lower the quality of the discourse between students. One teacher had previously applied this rule with a previous class to remarkable effect on the quality of discussion. But his dogmatic adherence to this rule with another class, subsequent to the agreement we negotiated at the conference, had disastrous consequences. The rule had the reverse effect. It prevented students from saying anything. Upon investigation it transpired that the first class was full of students who had some confidence in their own ideas. The subsequent class was full of students suffering from low self-esteem. The citing of anecdotes was for them a way of approaching discussion without placing their ideas at the risk of ridicule from their peers. Stenhouse was right to warn that our strategy could encourage insensitivity to context. Such insensitivity didn't simply manifest itself in terms of inappropriate applications of rules in specific contexts. There were teachers who, while applying the rules with some success, never subsequently progressed beyond them. Their teaching strategies didn't evolve and develop beyond those prescribed in the rules, becoming inflexible, rigid and restricted.

Nevertheless, some remarkable break-throughs were achieved by teachers. The approach promoted a necessary consistency of practice in many classrooms. For example, there was a rule that teachers should not 'fill up' the silent spaces in discussion and

how to activate teachers' self-reflection in a manner that was consistent with the ethical framework.

We identified a small number of teachers who appeared to be ready to reflect about their practices in some depth, and negotiated access to their classrooms. Although a more pro-active intervention than we had originally envisaged, the teachers appeared willing to collaborate and reasonably well motivated. Clem Adelman and I then involved each in a triangulation process. We recorded, either on a tape or a tape/slide, a lesson and interviewed the teacher and a sample of students about it. The interviews were recorded. The triangulation data was then discussed with the teacher, transcribed, and circulated with his or her (and their headteacher's) permission, to all the other teachers in the project. Throughout, the ethical framework was observed. Once the sets of triangulation materials were in circulation around the schools, we generated a list of diagnostic hypotheses for teachers to examine in the light of the data. The schools were organised into local groupings and the teacher teams in them met regularly at the local teachers' centre. The teachers who had participated in the triangulation studies showed a willingness at these meetings to openly discuss their data with peers.

The exercise evoked a great deal of interest amongst the other teachers. One of the major reasons was that it enabled them to compare samples of secondary and primary classroom practice. At the launching conference there had been a great deal of argument about whether primary and secondary practice had anything in common. There was a tendency to place secondary teaching well inside the traditional camp, and primary teaching well inside the progressive camp. Primary school teachers in particular were amazed about the extent to which the patterns of verbal interaction evidenced in the transcripts appeared to be remarkably similar between primary and secondary classrooms. There was a general tendency to accept our general hypotheses as grounded in the data.

We then asked the teachers to assess the extent to which the hypotheses generalised to their own practices. Many now became

thereby remove responsibility from students. Teachers found it incredibly difficult to tolerate silences and tended, after an initial effort, to give into pressure from students to initiate and sustain the talk. The rule helped many teachers to resist persistent pressure from students to good effect. They suddenly found, after a considerable period of time (weeks rather than days), students accepting greater responsiblity for the direction and shape of the discussion.

Many teachers, in a state of intellectual dependency on the diagnostic and prescriptive hypotheses of the central team, began to realise the aspirations of the project in their practices. They adopted strategies which evolved from sources beyond their own understandings of their classroom situation and their role within it. Subsequently some of them produced excellent case studies of their experience of the process of change (See Elliott and MacDonald, 1975). In retrospectively trying to explain what happened, teachers' minds were opened to new dimensions of the classroom process. For example, several testified to what appeared to be 'Damascus Road' type conversions of students to the value of discussion. After many weeks of facing what appeared to be increasing student resistance and hostility towards discussion-based inquiry the teachers found a dramtic change of behaviour occurred at a single point of time. They began to analyse the causes of such resistance in a very different light, now that they had 'broken through' and experienced success. Their view of students' intellectual capacities had shifted and they sought explanations of problems now, not so much in the 'abilities' of their students, as in the forms of social control reproduced through their teaching. The state of dependency we induced, rather than diminishing teachers' capacities for self-reflection, appeared in many cases to have enhanced it.

It seems that one might be able to demarcate two rather different accounts of how teachers reflectively develop their practices. These are:

1. The teacher undertakes research into a practical problem and on this basis changes some aspect of his or her teaching. The

development of understanding preceeds the decision to change teaching strategies. In other words, reflection initiates action.

2. The teacher changes some aspect of his or her teaching in response to a practical problem, and then self-monitors its effectiveness in resolving it. Through the evaluation the teacher's initial understanding of the problem is modified and changed. The decision to adopt a change strategy therefore preceeds the development of understanding. Action initiates reflection.

I tend to believe that the first account constitutes a projection of academic bias into the study of teachers' thinking. There is a theory of rational action here in which actions are selected or chosen on the basis of a detached and objective contemplation of the situation. On this theory one can separate out inquiry from practice (taking action). The second account may reflect the natural logic of practical thinking more accurately.

When practical problems arise the practitioner's first priority is to act quickly in order to resolve it. A request not to change anything pending further inquiry may appear to be a rather time-consuming process when other alternatives are possible. One alternative is to back one's own initial and largely intuitive processing of available data. Another is to draw on the wisdom of other knowledgeable practitioners if one has begun to doubt one's own diagnosis of the situation. In selecting an action-strategy on the advice of others, one acts on trust but not non-rationally. It may be more rational to adopt an action- strategy on trust initially and then review its merits, than suspend doing something about the situation until all the evidence has been analysed. While Nero fiddled Rome burned, and teachers may well feel that while they do research the situation disintegrates. Faced with a practical problem it is better to take a calculated risk of getting it wrong, and adjusting one's action-strategy retrospectively, than of not doing anything about the problem until one has fully understood it.

On the second account of practical thinking there is no separation of 'inquiry' and'practice'. The practice is the form of inquiry: a hypothetical probe into the unknown beyond one's present understanding, to be reviewed in retrospect as a means of extending that understanding. The search for understanding is carried out through changing the practice and not in advance of such changes.

Stenhouse coined the idea of the 'teacher as a researcher' to signify the dependence of pedagogical change on teachers' capacities for reflection. The idea, I believe, is contained in the first account of a reflective practice. The idea of 'educational action-research', however, is contained in the second account, and more accurately describes the logic of practical thinking underpining the curriculum reform movement in schools during the '60s.

The strategy of providing teachers with experimental teaching strategies was largely devised by me, and it marked a critical point in the development of the facilitator's role within the Humanities Project. It marked a transition from the idea of 'teachers as researchers' to the idea of 'teachers as action-researchers'. Although the central team prescribed experimental action-strategies, it is my belief that many teachers eventually agreed to suspend their own judgement in favour of 'sticking to the rules' because the rules were grounded in evidence of other teachers' classroom practices . Ultimately it was the experience of a small group of peers, represented in the data submitted for analysis, which persuaded teachers to accept the rules on trust for a period. This trust was not blind but informed by evidence, albeit not of the teachers' own practices. Our strategy, in spite of the problems with it, did contain elements which held high potential for enhancing the development of teachers' reflective capacities. The strategy helped to generate something like a shared body of insights and understandings into the problems of classroom innovation. It did so because a teachers were open to evidence of others' practices and were willing to transcend the limits of their own understanding in learning from it.

The negative element in the strategy lay in the manner in which the experience of classrooms was analysed and disseminated. The hypotheses on which the rules were based were generated entirely by the central team. The action-hypotheses stemmed from the thinking of the central team rather than the teachers. For some of the teachers this fact alone was sufficient to generate an uncritical adherence to the rules prescribed, in contrast to a provisonal adherence for the sake of experiment. What was required was a strategy which both facilitated the development of shared practical knowledge, and freed the practitioners from dependency on the facilitators.

During the dissemination phase of the Humanities Project the central team devised a self-training procedure for teachers (See The Humanities Curriculum Project: An Introduction, 1970). Teachers were asked to analyse tape recordings of discussions in the light of a series of questions. The questions focused attention on particular patterns of interaction and asked about their effects. For example:

> "To what extent do you interrupt students while they are speaking? Why and to what effect?"
>
> "Do you habitually rephrase and repeat students' contributions? If so, what is the effect of this?"

It was suggested that, although they may want to analyse their tapes privately in the first instance, teachers are likely "to find that, after a certain amount of progress has been made, it is profitable to meet to analyse tapes and discuss developing insights and outstanding problems".

The procedure was an attempt to support the reflective development of the pedagogy in the context of a self-supporting group of teachers. In most respects it was a revised version of the list of strategies we had asked teachers in the trial periods to test. But it was decided not to make these, or the diagnostic

hypotheses on which they rested, explicit. Rather than asking teachers to test diagnostic hypotheses, or experiment with srategies, we asked them to focus on the behaviour patterns which the project had found to be problematic in a number of trial school classrooms. In this way it was hoped that teachers would examine the extent to which such patterns operated in their own practices, and then generate hypotheses about their effects together with possible action-strategies for resolving the problems identified. The procedure aspired to help our teachers generate, as well as test, hypotheses for themselves, and to identify those which could be generalised across classrooms.

The problem with this self-training procedure is that the hypotheses and strategies the project team had in mind could easily be inferred from the questions. It is therefore questionable whether the procedure was any more effective in fostering independent reflection amongst teachers than a procedure which made the accumulated practical insights of the project quite explicit. Those in search of prescriptive dogma could easily construct it from the list of questions.

What the project could not avoid if it aspired to providing real support for teacher development at the dissemination phase, was making accessible to teachers in some form the shared practical knowledge and insights accumulated in the initial trial phase. And in doing so there is always a risk that teachers will handle such knowledge dogmatically and uncritically, rather than provisionally and experimentally. I am far from convinced that our self-training procedure was more effective in promoting reflective practice than the list of experimental strateies we had negotiated with our trial school groups of teachers. It could equally be interpreted as the product of 'insights' generated by academic experts on the central team, rather than the product of teachers' reflective practices. Having transformed diagnostic and action-hypotheses into focussed questions the project team couldn't then describe the process of hypothesis generation. The procedure tended to reinforce a tendency to assume that the hypotheses implicit in the questions were generated by the experts who asked the questions.

Subsequent to the Humanities Project's official 'life', Local Education Authorities in the U.K. during the '70s used check-lists of questions as a key strategy in attempts to get teachers to self-evaluate their practices (See Elliott, 1983). The check-lists were largely produced by local inspectors and advisers employed by the LEAs. The strategy, after a few years of immense popularity amongst local officials, was largely dropped during the early '80's. Teachers resisted the check-lists because they quickly discerned the rules in them. They interpreted this 'self-evaluation' strategy as part of a general strategy to increase bureaucratic control over the performance of teachers. The check-list syndrome has now reappeared in the context of the development of teacher appraisal schemes in the U.K. This time it is not the teachers who evaluate their practices in the light of prescribed questions, but their superordinates in management roles. Again, the origins of the 'knowledge' implicit in the questions and its evidential basis is not made explicit.

Check-lists generally appear to be a strategy for controlling how teachers think about practice while trying to disguise that this is what they are. I do not think our 'self-training procedure' escaped this criticism. It obscured the extent to which the implicit hypotheses and action-strategies were generated from teachers' own thinking about their classroom practices. I would argue that in the Humanities Project we never satisfactorily resolved the issue of how one facilitates autonomous reflective practice. And this was because we were reluctant to relinquish control over pedagogical theory. Both the list of experimental action-strategies and the self-training procedure were structured by the project teams' understanding of pedagogical aims and principles. We did not understand that in reflecting about their practices teachers could not only develop their teaching strategies, but also develop their understanding of the aims and principles they sought to realise through them.

However, if we adopt the Aristotelian view that practical inquiry is a form of practical philosophy, because it involves reflecting about practice and the values which constitute its ends in conjunction, then we must enable teachers to develop pedagogical theory as well as pedagogical strategy through

reflective practice (See Elliott 1983 & 1987). Within the Humanities Project we treated pedagogical theory as our territory and thereby ultimately controlled the extent to which teachers could develop their pedagogy reflectively. The idea of 'teachers as researchers' was bound to a context in which reflection was confined to empirical rather than conceptual inquiry; the latter remaining the territory of specialist theorists.

The attempts of the Humanities Project team to facilitate reflective practice in schools generated an important conceptual distinction between the 'research' role of the outsider in relation to the 'research' role of the insider-practitioner (See Elliott, 1976-77). Stenhouse contrasted the first-order inquiry of the teachers with the second-order inquiry of the central team. The teachers' inquiry was focused on the problems of developing pedagogical strategies consistent with educational aims and principles. The teams' inquiry was focused on the problems of facilitating teachers' reflective capacities. The team were cast in the role of teacher developers which was also conceptualised as a form of reflective practice. The view of the relationship between external academic change agents and practitioners within the curriculum development process, went through a transition from the idea of collaborative research into the problems of developing the pedagogy to the idea of each party focusing on a quite distinct domain of practical investigation. The external change agents' second-order inquiry into the problems of facilitating the development of teachers' reflective capacities, supports and at times intersects with the first-order pedagogical inquiry of teachers.

This distinction emerged as the project's facilitation strategies moved away from getting teachers to test hypotheses generated by us, towards helping teachers to take more responsibility for hyotheses generation themselves. This transformation was itself the product of an increasing reflexive awareness amongst the central team of the hidden forms of control they exercised over teachers' practical thinking. How to facilitate such thinking, without manipulating and distorting it for our own ends, became a major focus for reflection and discussion. Although this was a problem we didn't resolve, sufficient progress was made to

provide me with an impetus for future deliberation in the context of two action-research projects I was subsequently involved with.

The emergence of a second-order form of practical inquiry engaged in by external facilitators of teacher development, has implications for the role of evaluation in curriculum development. The Humanities Project had an evaluation unit as well as a development team. During the funded life of the project this unit also made a contribution to the generation of seminal ideas, which were not unconnected with those of the development team.

Stenhouse and his team had articulated a Process Model of curriculum development, in contrast to the Objectives Model in which the quality of teaching was the critical issue, rather than the quality of the curriculum materials. The idea of 'teachers as researchers' emerged within this context as an explanatory account of teaching quality. The quality of teaching depended on the development of teachers' reflexive powers.

Stenhouse's Process Model of curriculum development posed a problem for the evaluation team attached to the project under the leadership of Barry MacDonald (1970). The team couldn't design an evaluation based on measurements of goal achievement, since the project had refused to specify behavioural objectives as a basis for its work. Moreover, the project had emphasised the importance of particular contexts for the way curriculum practices shaped up. The evaluation team concluded that generalisations about innovations needed to be derived from comparisons of complex case-data, rather than from aggregated data which abstracted from contexts of practice to provide gross-yields on objectives. Psycho-metric methods were rejected in favour of qualitative methods which identified and described the significant variables operating in particular contexts.

The evaluation team focused on the organisational context of the innovation. It case-studied schools with a view to examining the ways in which organisational climates, policies, and structures interacted with pedagogy in classrooms. It also monitored our attempt within the development team to support classroom

innovation. The Evaluation Unit published a regular newsletter in which case-data was used to portray the project in schools, and the issues, problems, and possibilities it raised within them.

MacDonald and his team spearheaded the development of a naturalistic methodology for the evaluation of educational programmes in the U.K. (See Simons 1987). They also shaped this methodology with an educative intent. The role of the evaluator they argued was to provide information to all those who held a legitimate stake in the programme, e.g. the sponsor, school managers, administration, teachers, and the central development team. It is not for the evaluation to judge the programme's merits. Judgement is the preserve of its audiences. The task of evaluation is to assesmble and organise data-bases which others could use to develop their understanding.

I have described the approach of the evaluation unit in some detail because it is necessary to point out the division of labour which existed amongst project staff. Whereas the development team focused on materials production and implementation problems in classrooms, the evaluation unit focused on the organisational and system context, and the interactions between the development team and teachers. The development team were interventionist and committed to the aims and principles of the project. The evaluation unit took an independent and impartial stance. Moreover, the audience of the central developers largely consisted of teachers, while the evaluation unit reported to multiple audiences, some in positions of power and influence over the future of the programme.

One of the effects of the evaluation was to heighten awareness amongst teachers and the central development team of how the organisational ethos impacted on pedagogy. Attempts to explain problems in realising the pedagogical principles in practice referred to factors in the organisational and system context which shaped and constrained teachers' and students' interactions. The focus of the teachers' and team's research may have been on classroom events, but this didn't confine the data collection process to classrooms. In this respect there was a

great deal of exchange of information. The evaluation unit not only fed information to teachers and the central developers, but both these parties contributed information to the evaluators.

There is also no doubt in my mind that the emergence of a reflexive attitude amongst the central developers was stimulated by the questions and issues posed by the evaluation unit. However, there is an issue about whether the division of labour between external change agents and evaluators is the best way of organising support for curriculum development. Certainly a growing tension developed on this issue between Stenhouse and MacDonald subsequent to the Humanities Project. MacDonald argued for the necessity of strong independent evaluations of innovatory programmes. Stenhouse argued that evaluation should not be a specialised role, but integral to reflective practice. This was an issue I had an opportunity to explore in two subsequent projects.

The Ford Teaching Project: educational researchers as teacher educators

The Ford Teaching Project was sponsored by the Ford Foundation from 1973-75. It had a central team of two academics: myself and Clem Adelman. The project involved over 40 teachers in 12 schools undertaking action-research into the problems of implementing inquiry/discovery methods in their classrooms. The schools covered the full age-range and the teachers were drawn from different subject areas. My aspiration in designing the project was to explore the possibility of teachers developing a common stock of professional knowledge about the problems of realising an alternative to the traditional pedagogy which had so long prevailed in classrooms. This would involve teachers communicating across some of the long-established boundaries in initial and in-service teacher education, e.g. between the primary and secondary sectors, and different subject areas.

The project was a response to a clear problem which had emerged across the curriculum reform movement in both primary and secondary education. The vast majority of innovatory projects,

whether nationally or locally initiated, espoused the use of 'Inquiry' or 'Discovery' methods in the classroom. External change agencies assumed that in order to implement such methods all the teachers required were appropriate curriculum materials. This assumption, as experience with the Humanities Project suggested, proved to be unfounded.

The problems of change at the level of pedagogy needed a more radical analysis than that of 'needing appropriate resource material'. I wanted teachers to make a contribution to this analysis through their own action-research. It implies that they should already be committed to using 'Inquiry' or 'Discovery' methods in their classrooms and to the aims and values implicit in them. The project was not designed as an attempt to convert teachers to an innovatory pedagogy but to support those already committed, but who were nevertheless experiencing difficulty in realising their aspirations in practice.

In many ways the Ford Project built on foundations laid by the Humanities Project. But it drew on lessons learned from that experience concerning the problems of facilitating pedagogical change. These may be summarised as follows:

- The project was designed as teacher-based action-research and not simply as teachers' research. The term 'action-research' indicated a clarification of the research paradigm involved, and the relationship between research and teaching. They were not conceived as two separate activities. Teaching was viewed as a form of educational research and the latter as a form of teaching. In other words the two activities were integrated conceptually into a reflective and reflexive practice.

- Teachers were to generate as well as test diagnostic and practical hypotheses.

- Teachers were expected to develop a pedaogical theory as well as explore how to realise it in practice. The approach was to help them to reflect about the aims and values implicit in their definitions of problem situations within the classroom.

- The classroom action-research was designed as a co-operative rather than individualistic endeavour aimed at generating shared insights and practices as teachers tested each other's hypotheses in a range of contexts.

- At an early stage the central team defined a second-order action-research role for themselves aimed at facilitating first-order action-research.

The first four of these were clearly reflected in an initial tasks-description produced by the central team.

1. To identify and diagnose in particular situations the problems that arise from attempts to implement discovery/inquiry approaches effectively; and to explore the extent to which problems and diagnostic hypotheses can be generalised.

2. To develop and test practical hypotheses about how the teaching problems identified might be resolved, and to explore the extent to which they could be generally applied.

3. To clarify the aims, values, and principles implicit in inquiry/discovery approaches by reflecting about the values implicit in the problems identified.

A detailed account of the problems and progress of this project was presented at the 1976 AERA meeting in San Francisco (See Elliott, 1976-77). I do not intend another comprehensive account in this paper. But in relation to the five features listed above I will briefly attempt to describe and discuss what happened.

As in the Humanities Project, the central team saw itself as collaborating with teachers in the collection and analysis of classroom data. But we were clearer about the inconsistency between enhancing our own expertise and authority as classroom researchers and facilitating reflective practice amongst teachers. In order to communicate this intent we devised and negotiated an ethical framework with our teachers; namely that:

very interested in looking at their practices in the light of the hypotheses. Some were unhappy about being involved in a fully-blown triangulation exercise which included student feed-back, but happy to be observed, or to study recordings of their lessons. We were careful not to prescribe a particular combination of data-gathering techniques, allowing each teacher to select whichever techniques they found personally feasible and helpful. Individuals tended to select techniques which provided them with sufficiently illuminating, but not over-threatening, data.

By the second half of the project, after two terms of the project in schools and an interim conference in which teachers shared data, there was a considerable increase of activity. Teachers increasingly observed each other's classrooms, and more requested to be involved in triangulation. About a third of the teachers embarked on case studies of some aspect of their teaching with a particular class. At the final conference a group of teachers undertook the task of distilling a list of general hypotheses about the problems of implementing inquiry/discovery methods from the collective experience. In doing so they not only included those generated by the central team initially. They were able to describe new insights which had emerged from reflection and discussion about classrom experiences during the course of the project. After four terms some teachers had begun to generate, as well as test, hypotheses about life in classrooms.

Although the strategy I have described appeared to be similar in many respects to that employed in the Humanities Project it differed in certain significant respects. First of all, we operated within a code of practice which placed more explicit restrictions on our power to control teachers' thinking about their practice. Secondly, we established an organisational framework of local and central meetings which enabled teachers to reflect together about the triangulation data, and the hypotheses we generated from it, in the presence of the participating teacher. This process made teachers feel less powerless and dependent on the thinking of the central team. In other words, the hypothesis-testing process in the Ford Project was mediated by discourse between peers rather than discourse with the central

team. We had established a framework for professional discourse and activated it by generating some initial hypotheses. But we did not mediate this discourse to the same extent as the central team on the Humanities Project. The risk of us controlling its development and outcomes was less. The professional discourse eventually enabled teachers to produce their own hypotheses and to generalise them across classrooms and contexts.

Finally, during the second term of the project, teachers were asked to explicate the theory of teaching implicit in their own classroom practices. As they became aware of the theory which guided their pedagogy they collected and analysed data in the light of their own theory rather than ours. In the Humanities Project it was the facilitators who articulated the theory. Teachers were therefore having to identify and diagnose pedagogical problems in the light of criteria specified by outsiders. Within the Ford Project we tried to help them reflect about their practices in the light of theories they articulated. Under these circumstances one might expect less resistance to gathering and analysing data about classroom processes.

The strategy we employed to help teachers articulate their pedagogical theories was as follows. At the initial launching conference we tape-recorded discussions of evidence about classroom practices depicted in transcripts and on video-tape. We listened subsequently to the tapes and noted issues which emerged. Many of them revolved around whether or not the practice was an example of inquiry/discovery methods. We had asked teachers to assess the extent to which the practices depicted constituted cases of inquiry or discovery methods. It appeared that disputes about this were grounded in rather different conceptions of such methods.

We extracted from the tapes the terms teachers used to describe the practices they discussed. Amongst the most frequently recurring terms employed were a number of bi-polar pairs. We then interviewed teachers to elicit the meanings they ascribed to

these bi-polar constructs. Sometimes teachers, we discovered, used different terms to refer to the same idea, and the same terms to refer to different ideas.

On the basis of the interviews we identified three main dimensions of pedagogical practice which were delineated by the most frequently used terms. These were:

1. Formal-informal; dependent-independent. The terms formal-informal were used to pick out the degree of intellectual dependence-independence of students on the teacher's authority position.

2. Structured-unstructured; subject centred-child centred. Structure was interchangeable with framework, but more widely used than the latter. Structured-unstructured could be interchanged with subject centred-child centred. Both these sets of terms referred to the teachers' aims and were used to describe the degree to which they were concerned with getting students to achieve preconceived knowledge outcomes. The more the teacher's aims are concerned with getting preconceived knowledge outcomes, the more structured or subject centred the teaching; the more they are concerned with the process rather than the products of learning, with how the student is to learn rather than with what, then the more unstructured or child centered the teaching.

3. Directed-guided-open ended. These three terms picked out points along a

> single dimension and referred to the methods by which teachers try to implement their aims. The teacher's methods tend to be directive when they prescribe in advance for students how a learning activity is to be performed. They are guided when they are responsive to problems perceived by students in performing learning activities, e.g., by asking questions, making suggestions, or introducing ideas in response to task problems cited by students. Open ended methods are negative in character, being solely concerned with refraining from imposing constraints on students' abilities to direct their own learning. The directed-guided-open ended dimension picked out the degree of control the teacher tries to exert over the learning activities of the student.

Teachers' accounts of inquiry/discovery teaching were often couched in a combination of terms covering each of these dimensions. We discovered from our analysis of the discussions at the launching-off conference that four different theories of inquiry/discovery were being applied to the data. These were:

> 1. Informal-structured-guided. A teacher can pursue preconceived knowledge outcomes by guiding students towards them without imposing constraints on their ability to direct their own learning.
>
> 2. Informal-structured-open ended. A teacher can pursue preconceived knowlege outcomes and foster and protect self-directed learning by

concentrating solely on removing constraints and refraining from any kind of positive intervention in the learning process.

3. Informal-unstructured-guided. A teacher can foster and protect self-directed learning and exercise positive influence on the learning proceses so long as this influence is not exerted to bring about preconceived knowledge outcomes.

4. Informal-unstructured-open ended. A teacher cannot foster and protect self-directed learning and pursue preconceived knowledge outcomes or exercise positive influence on learning processes. Teaching strategies must be restricted to protecting students' powers of self-direction.

During the second term we asked each teacher to identify which theory was implicit in their own practices. During the interim conference at the end of this term we presented teachers with sets of data about each others' practices, and asked them to identify the theory implicit in each. By the third term of the project teachers had begun to conclude that Informal-Structured-Guided teaching represented the most commonly held theory of discovery/inquiry teaching. But the data they examined from their own and others' practices suggested that this theory was extremely problematic. Few teachers appeared to both enable independent reasoning and promote the acquisition of pre-specified and sequenced knowledge outcomes. The two processes appeared to be inconsistent with each other. The Informal-Unstructured-Open ended and Informal-Structured-Open ended conceptions were also rendered problematic by the study of practice. The former was rendered problematic as a theory of teaching because it appeared to place the teacher in the passive role of not positively intervening to facilitate learning. The

latter was rarely manifested, but when it was appeared to place students in the quite unfair double-bind situation of being expected to know what the teacher wanted without being given any indication of this. Increasingly teachers sought to realise an informal-unstructured-guided pedagogy as one which implied an internally consistent theory. However, it called for the highest level of practical competence on the part of teachers.

The teachers' increasingly active involvement in collecting, sharing, and discussing data changed the pedagogical theories underpinning their practices. Indeed, such changes tended to result in a growing consensus about how to conceptualise the pedagogy they were striving to implement in the classroom. In the Ford Project teachers developed a pedagogical theory as well as a pedagogical praxis.

In my view the Ford Project didn't only generate a more emancipated and developed form of reflective practice amongst teachers than the Humanities Project. It also generated a more developed second-order form of reflective practice amongst the external change agents. On the central team we collected and analysed second-order data about our facilitation strategies and their effects on teachers' capacities for self-reflection. The hypotheses (See Elliott 1976-77, pp18-21) which emerged tended to focus on the problems of personal change in teachers.

"1. **The less teachers' personal identity is an inextricable part of their professional role in the classroom, the greater their ability to tolerate losses in self-esteem that tend to accompany self-monitoring.** In order to adopt an objective attitude to their practice, teachers need to be able to tolerate the existence of gaps between their aspirations and practice, with a consequent lowering of professional self-esteem. The more teachers self-monitor, the more mastery of their craft appears to elude them. As one teacher commented (Rowe, 1973):

"Nothing is ever in a state of stasis, nothing is ever finalised, always there is a reappraisal in the light of new experience. Like children we hanker after the finiteness of things, and like children, we are disturbed when there is frequent reassessment and modification."

Tolerance is difficult to achieve if the sole source of teachers' personal achievement and satisfaction lies in their classroom practice. To tolerate losses of self-esteem, it becomes necessary for them to get satisfaction from their performances in extra-professional situations. We had little success wtih those teachers whose personal identity was inextricably linked with their professional role in the classroom.

2. **The less financial and status rewards in schools are primarily related to administrative and pastoral roles, the more teachers are able to tolerate losses of self-esteem with respect to classroom practice.** This is particularly true in our expanding, reorganised, secondary schools. Systematic reflection on practice takes time, and it was our secondary teachers who complained most about lack of time. Does this situation mean that they work harder than our primary and middle school teachers? Not necessarily. For primary school teachers, the demands of reflecting about the classroom constitute an extension of their existing commitment to the activity of teaching. But secondary school teachers are increasingly committed to administrative and pastoral functions that are only indirectly connected with the classroom. Thus, the demand to give more to the classroom situation generates conflict between alternative commitments.

Almost without exception those teachers with the least capacity for self-criticism have been those who have identified themselves strongly with roles outside the classroom situation. It is as if they can function without severe personal stress in a number of fragmented roles within the system only be maintaining a low degree of self-awareness about their classroom performance. The only way to resolve such stress is either to identify exclusively with the administrative

or pastoral roles so that the quality of teaching no longer impinges on questions of self-esteem, or to withdraw from the former and sacrifice status and opportunity completely.

One of the current myths in education is that teaching experience necessarily qualifies a person to make educational policy decisions. Yet given the increasing role fragmentation in educational institutions, it is in fact extremely difficult for a person to move into a policy-making role without sacrificing depth for shallowness of understanding in the classroom. We reached a stage in the project where some of our teachers were faced with the problem of school and department heads who were so out of touch with the reality of the classroom they were incapable of responding supportively.

3. **The more teachers value themselves as potential researchers, the greater their ability to tolerate losses of self-esteem.**
We found that once teachers began to perceive themselves as potential researchers, they developed a greater tolerance of gaps between aspirations and practice. An outside participant observer can do much to help teachers develop this alternative self by treating them as partners in research activities.

4. **The more teachers perceive classroom observers as researchers rather than evaluators, the greater their ability to tolerate losses of self-esteem.**
For our teachers an "evaluator" ascribes praise and blame and allows few rights of reply. The "researcher" role we tried to adopt focussed on the practice rather than the practitioner. We tried to set our appraisals of practice in a context of dialogue with the teacher. Within this role teachers tended to perceive us as non-judgemental. Our refusal to ascribe blame helped at least some teachers to tolerate the gaps between aspirations and practice.

5. **The more access teachers have to other teachers' classroom problems, the greater their ability to tolerate losses in self-esteem.**
Once our teachers began to realise that others had similar problems and were able to study them objectively, they tended to tolerate losses in their own self-esteem more easily.

6. **The more teachers are able to tolerate losses in self-esteem, the more open they are to student feed-back.**
Many of our teachers claimed that student feed-back was the most threatening kind of feed-back they could have. This is possibly so because students are in the best position to appraise teachers' practice. Openness to

student feed-back, therefore, indicates willingness to change one's appraisal of oneself as a practitioner.

7. **The more teachers are able to tolerate losses in self-esteem, the more open they are to observer feed-back.**
Even though not as threatening as student feed-back, observer feed-back is still threatening enough.

8. **The more teachers are able to tolerate losses in self-esteem, the more willing they are to give other teachers access to their classroom problems.**
Our experience indicates that initially teachers are more open with professional peers from other schools, especially if they are teaching a different age-range, than with teachers in their own schools. Our inter-disciplinary teams tended to collapse because interdepartmental competition made openness between teachers difficult.

9. **The more open teachers are to student feed-back the greater their ability to self-monitor in their classroom practice.**
The reasons for this and the next two hypotheses have been explained in an earlier section.

10. **The more open teachers are to observer feed-back the greater their ability to self-monitor in their classroom practice.**

11. **The more open teachers are to feed-back from other teachers, the greater their ability to self-monitor in their classroom practice.**

12. **The greater teachers' ability to self-monitor in their classroom practice, the more they experience conflict between their accountability as educators for how students learn (process) and their accountability to society for what they learn (in terms of knowledge outcomes).**
Self-monitoring sensitises teachers to accountability issues. The issues presented themselves in the project as a dilemma between protecting self-directed learning and pursuing preconceived knowledge outcomes.

13. **The more able teachers are at self-monitoring in their classroom practice, the more likely they are to bring about fundamental changes in it.**
This is the main premise on which the project was founded. Our experience tends to confirm it. Once teachers began to clarify and test their practical theories, the new theories generated tended to be reflected in changes in practice. The main problem is getting teachers to self-monitor in their practice."
(INTERCHANGE, A Journal of Educational Studies, Vol 7, No. 2, 1976-77)

Some of these hypotheses refer to the organisational and system contexts in which teachers work. The second hypothesis links teachers' capacities for self-reflection with the distribution of financial and status awards in schools. The fourth pin-points the importance of institutional arrangements which enable teachers to share their experiences of classroom life. The twelfth hypothesis suggests that reflective practice in schools generates an awareness of the dilemma between realising a worthwhile educational process and meeting the social demand for pre-specified learning outcomes, and of the influence of the institution on the ways they have attempted to reconcile education with social reproduction.

Reflective practice implies reflexivity: self-awareness. But such an awareness brings with it insights into the ways in which the self in action is shaped and constrained by institutional structures. Self-awareness and awareness of the institutional context of one's work as a teacher are not developed by separate cognitive processes: reflexive and objective analysis. They are qualities of the same reflexive process. Reflexive practice necessarily implies both self-critique and institutional critique. One cannot have one without the other.

This became very clear in the Ford Project. Those who developed their capacities for action-research displayed a considerable critical awareness of the institutional constraints on the development of their teaching. But they found it difficult to establish a critical discourse on these matters within the institution as a whole. Few schools at the time had established organisational forms which fostered institutional self-critique.

Crucial here were headteachers and others in senior management roles in schools. When we negotiated the project their attitude in most schools was a rather laissez-faire one. The participation of teachers in the project, they felt, was up to individuals to decide. If they wanted to be involved that was fine. But if they didn't that was fine too. The project was seen as of possible benefit to individual teachers rather than of benefit to the institution as a whole. What transpired in any classroom was the responsibility of the teacher involved, not of

the institution. How the latter enabled or constrained quality in teachhing was not a question many of the 'managers' appeared to be asking.

The institutional structures which shape teachers' practices in classrooms also shape their thinking about their practices. In many of our schools teachers' opportunities for reflecting about their practices with each other were severely limited. This in turn limited their opportunities for both self and institutional critique.

As the funded life of the Ford Project drew to a close it became clear that action-research would not be maintained, let alone increased, in many of the schools once the support structures we had established were removed. How to institutionalise action-research in schools and the educational system emerged as a major problem for our second-order action-research. But it was too late to address that problem in the context of the Ford Project. It was impossible to facilitate institutionalisation without continued external funding. The university context of the facilitators themselves did not provide resources for working with teachers collectively inside the system. Resources were only allocated for working with individuals outside the system when they attended academic courses.

Subsequent to the Ford Project the best we could do, with a small grant from Ford, was to create a network of teachers and teacher educators who were interested in classroom action-research. The project had attracted a great deal of national and some international interest. Other action-research projects had begun to emerge, and some academics, including myself, were attempting to restructure award-bearing inservice courses at Diploma and Masters levels to support and foster reflective practice in schools (See Elliott, J. 1981 and 1978). The Classroom Action-Research Network (CARN) was established in 1976 to enable individuals and groups committed to action-research in the U.K and other countries to communicate with each other and share experiencethrough correspondence, papers documenting the experience of action-research, and conferences. This international network is still flourishing 12 years later, and is

co-ordinated by Peter Holly at the Cambridge Institute of Education and Bridget Somekh at the Unit for Educational Development in the School of Education, University of East Anglia. The aspiration of CARN was to provide a minimum of support for the emergent action-research movement. It is now self-financing.

In 1981 I embarked on another funded classroom action-research project with teachers. The design of this project embodied a number of strategies which emerged from my thinking about the problems of implementing action-research in the Ford Project schools.

The 'Teacher-Student Interaction and Quality of Learning Project' (T.I.Q.L.)

This piece of action-research was funded by the Schools Council from 1981-83 and focused on the problems of 'teaching for understanding' within the context of the public examinations system. It had a team of four part-time and one full-time external facilitators based at the Cambridge Institute of Education. The full-time person was David Ebbutt, an ex-Ford Project teacher.

Bearing the institutionalisation problem in mind we selected nine schools in which the senior management were concerned with staff development at the level of the classroom. The way we identified the schools was to locate a number of 'senior managers' who had undertaken classroom action-research as part of an award-bearing inservice Diploma or Masters course at the Cambridge Institute of Education. We then asked each of them to collaborate with us in facilitating teacher-based action-research into the problem area for investigation. The facilitation role was differentiated between internal and external facilitators in schools. We also made it clear to the inside facilitators that they were expected to develop strategies which enabled the institution to support, acknowledge, disseminate, and respond to the teachers' action-research.

We felt that many of the problems of institutionalising action-research in schools could be fruitfully explored by a person who was both in a power role within the organisation and in the role of an action-research facilitator. Any conflict between organisational structures and reflective practice would be manifested in the manager-facilitator's experience and clarified, even resolved, through his or her own second-order action-research.

We therefore built into the design of the project an internal management responsibility for second-order action-research into the problems of institutionalising classsroom action-research. In this way it was hoped that the project would foster both reflective practice at the classroom level and reflective management at the school level. The role of the external team was to facilitate action-research at both the level of the classroom and the level of the organisation.

With respect to the classroom level we helped individuals to collect and process data about their practices. We responded to requests from the internal facilitators to support particular teachers they had identified as wanting, or in need of, help.

Although we helped teachers to collect and analyse data, we emphasised their ownership of it and their responsibility for disseminating the insights they derived from it. We did not take data out of the school, except on a short-term basis to prepare for a discussion with a teacher. Nor did we disseminate any analyses of data. Instead we organised twice-termly across-school meetings as a basis on which teachers could share case-study accounts of their practices in relation to particular problems they had identified. We didn't frame their problem-definitions by a pre-determined pedagogical theory. In fact we resisted attempts by local education inspectors to get the teachers to work to a technical model of teaching, in which they pre-specified the aim of 'teaching for understanding' into precise learning outcomes. We argued that as teachers collected data around what they felt to be problems in realising this aim they would begin to ask questions about the nature of the aim itself.

By the end of the project teachers had clarified, through reflection and discussion, a list of principles they believed to be implied by the aim. (See Ebbutt, D. and Elliott, J. Eds. 1985 pp.135-136, 12.1-12.3). Moreover, we were able to feed into this process, at the teachers' request, theoretical literature about the nature of understanding. In this way helped teachers link their reflections to a wider body of theory without promoting intellectual dependence.

By the end of the project 20 case studies had emerged from action-research in schools (See Elliott, J. and Ebbutt, D. Eds. 1986). Teachers subjected these to a comparative analysis exercise at a final project conference. They grouped the case studies around the major problem-areas they had clarified together over the two years of the project. From this analysis a number of diagnostic and action-hypotheses were generated in relation to the problem-areas. The teachers then grounded these in the case study evidence. The product was a book written almost entirely by themselves (See Ebbutt, D. and Elliott, J. Eds. 1985).

One of the aims of the T.I.Q.L. project was to demonstrate the capacity of teachers to generate, test, and disseminate a common stock of professional knowledge about classroom processes which raised issues concerning the nature of schools as agents of public policy. In order to demonstrate such a capacity we felt that we had to minimise the extent to which we academics controlled what constituted valid knowledge of the educational process while providing organisational and methodological frameworks which supported reflective practice in classrooms, the development of shared understandings, and their dissemination.

In my view this project was the least power-coercive attempt to facilitate reflective practice in classrooms that I have engaged in. It was the project in which I can most honestly claim that the teachers were largely responsible f.. generating, developing, and publicly disseminating understandings of the pedagogical process. They also demonstrated that, given opportunities within

their institution for reflection, they were able to articulate and develop the pedagogical theories implicit in their practices.

However, although the idea of building the project around internal facilitators, occupying senior management positions but committed and competent action-researchers, ensured in most schools a measure of institutional support during the project, this was not maintained after the project terminated. It was as if the internal facilitators required their strategies within schools to be validated by a strong external support team possessing influential sponsorship. They had begun to feel isolated and alienated from other managers in the school. Retrospectively we realised that as with teachers, so we need to work with managers collectively.

This leads me to conclude with a brief reflection about the relationship between independent evaluations of educational change programmes and the practitioners, managers, and external facilitators of change. MacDonald's naturalistic paradigm of Democratic Evaluation, referred to earlier (See also MacDonald 1976), can be viewed as a set of strategies for facilitating reflective judgements, decisions, and actions by all constituent parties whose activities shape, and impinge upon, processes of teaching and learning. In facilitating reflective practices amongst classroom teachers one must also facilitate reflective practices amongst school managers, officials in the educational system, and the consumers of schooling; students and parents. One cannot realistically foster teachers' learning through action-research without also fostering the learning of other parties through this process. Moreover it is clear that this holistic facilitator must have a sphere of independent operation.

The Democratic Evaluator who collects, organises, and disseminates data from a variety of sources does so as a means of creating an informed and educative discourse which accommodates the views and perspectives of a variety of constituents. The evaluator too is an educator but not just a teacher educator. Stenhouse was right to see evaluation as an integral element of educational practice. But he was wrong to assume that independent evaluators are not themselves engaged in a form of

educational practice. The more holistic the approach of the action-research facilitator, the closer the facilitator will look to that of the democratic and naturalistic evaluator.

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